



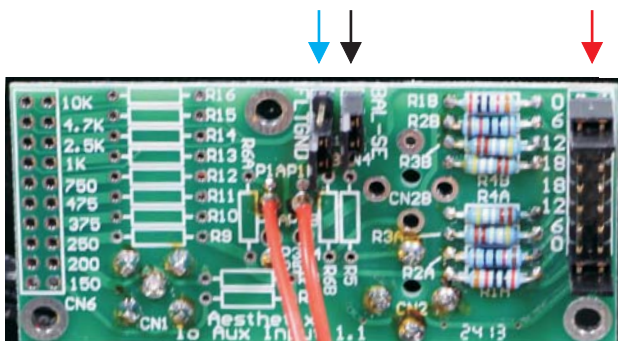
Io with Volume Controls One Phono Input & One Line Input

Important Note One: Never change inputs between line and phono with the volume controls up. Always ensure the volume controls are at their minimum (fully counter-clockwise) setting before changing inputs. Unless the volume controls are at their minimum setting, a loud discharge will occur that can potentially damage speakers.

Important Note Two: Never change the below settings with the Io on. Always turn off the Io and wait 20 minutes before altering internal settings. This allows the power supplies to fully discharge. If in doubt, refer to your qualified Aesthetix dealer or the factory.

An Io with volume controls configured with one phono input and one line input can have two Aux Input boards (one for left, one for right) shown at the rear of the unit in the below photo (right).

The picture below shows a close-up of the Aux Input board.



A traditional line section has the following structure:

Volume control – gain stage – output stage

It is nearly impossible to overload the gain stage with the above structure. However, the noise level remains constant regardless of volume setting.

The gain structure of the line input section of Io is:

Gain stage – volume control – output stage

The gain stage can be overloaded with this structure, leading to high levels of distortion. However, the noise level of the gain section is attenuated by the volume control, leading to extremely high signal to noise ratios (low noise). The Aux Input board provides attenuation tailored to the connected source component (CD player, etc) to prevent overloading the gain stage. When properly configured, this structure leads to extremely high levels of performance from the line section.

The red arrow indicates where the user can configure attenuation jumpers. The upper and lower settings are labeled “0”, or no attenuation. Locate both jumpers to the “6” positions for –6dB; “12” for –12dB or “18” for –18dB. Both jumpers for each channel should always be set to the same attenuation. Both channels (left and right) should be set to the same attenuation. There are four jumpers in total. These are most easily changed with needle-nose pliers or tweezers.

The below chart indicates the recommended attenuation settings according to the source component connected:

Source Output Voltage (Balanced)	Recommended Attenuation	Typical THD (ref 1V out bal)	Overall gain at max volume setting
<500mV	0dB	.05%	30dB bal in – bal out
500mV – 1V	-6dB	.05%	24dB bal in – bal out
1V – 2V	-12dB*	.05%	18dB bal in – bal out
>2V	-18dB	.05%	12dB bal in – bal out

*Factory default setting

Important note: By default older units do not have the Aux Input board. A fixed attenuator was installed of -18dB. Those units can be upgraded by having the Aux Input board installed.

The blue arrow points to a 2 position jumper setting used to select a floating or grounded input for the RCA connector. Typically it should be set to GND, or its lower position. This is the factory default.

The black arrow points to the Bal/SE jumper setting. When the Single-Ended (RCA) input jack is used, this jumper should be set to SE, or its upper position. Set it to BAL, or the lower position when the Balanced (XLR) jack is used. BAL is the factory default position.